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Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

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Job No.: CTCE/BBMP/W.No.08/KRIDL/SDBC/Shape_T/2014-15 : 14.07.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	: **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager,** KRIDL, Bangalore.
Name of Work	: Improvements to roads and drains at Kodigehalli Village in Ward No.08, BBMP, Bangalore.
Reference	: AEE/KH/435/2014-15 Dated : 26.05.2014
Technical Reference	: IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	: Semi Dense Bituminous Concrete
Date of Testing	: 14.07.2014

Result : Flakiness Index = **11.55%**

Elongation Index = **12.80%**

Result : Combined Flakiness & Elongation index 24.35%

Comments:

Maximum allowable Flakiness & Elongation Index for Semi Dense Bituminous Concrete is 30%

Note:

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Þ The results indicated above are based on the tests carried out on the samples collected by the laboratory

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Job No.: CTCE/BBMP/W.No.08/KRIDL /SDBC/AIV/2014-15 14.07.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager,** KRIDL, Bangalore.
Name of the Work	Improvements to roads and drains at Kodigehalli Village in Ward No.08, BBMP, Bangalore.
Reference	AEE/KH/435/2014-15 Dated : 26.05.2014
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	14.07.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	385	390	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	84	91	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	301	299	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	21.82	23.33	22.58

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Comments:

→ Maximum allowable Aggregate Impact value for Semi Dense Bituminous Concrete is 27%

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Job No.: CTCE/BBMP/W.No.08/KRIDL/WMM/S-T/2014-15 17.06.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager,** KRIDL, Bangalore.
Name of Work	Improvements to roads and drains at Kodigehalli Village in Ward No.08, BBMP, Bangalore.
Reference	AEE/KH/435/2014-15 Dated : 26.05.2014
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	17.06.2014

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Result : Flakiness Index = **12.65%**

Elongation Index = **13.80%**

Result : Combined Flakiness & Elongation index 26.45%

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

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Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager,** KRIDL, Bangalore.
Name of the Work	Improvements to roads and drains at Kodigehalli Village in Ward No.08, BBMP, Bangalore.
Reference	AEE/KH/435/2014-15 Dated : 26.05.2014
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	17.06.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	385	390	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	83	84	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	302	306	
4	Aggregate Impact value = percent fines	21.56	21.54	
	100* (W_2/W_1)%			21.55

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Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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16.06.2014

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GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements to roads and drains at Kodigehalli Village in Ward No.08, BBMP, Bangalore.

Reference : AEE/KH/435/2014-15 Dated : 26.05.2014

Date of Testing : 16.06.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **7600**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	190	190	2.5	97.5	95-100
22.4	2510	2700	35.5	64.5	60-80
11.2	1490	4190	55.1	44.9	40-60
4.75	1025	5215	68.6	31.4	25-40
2.36	930	6145	80.9	19.1	15-30
0.600	590	6735	88.6	11.4	8-22
0.075	730	7465	98.2	1.8	0-8

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Job No.: CTCE/BBMP/W.No.08/KRIDL/CUBE/2014-15 30.06.2014

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of the work : Improvements to roads and drains at Kodigehalli Village in Ward No.08, BBMP, Bangalore.

Reference : AEE/KH/435/2014-15 Dated : 26.05.2014

Sample ID : Cement Concrete

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Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{15}

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	02.06.2014	30.06.2014	8.188	358.6	15.94
2	02.06.2014	30.06.2014	8.210	365.6	16.25
3	02.06.2014	30.06.2014	8.350	365.9	16.26

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TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements to roads and drains at Kodigehalli Village in Ward No.08, BBMP, Bangalore..

Reference : AEE/KH/435/2014-15 Dated : 26.05.2014

Date of Testing : 27.05.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **10000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	285	2.85	2.85	97.15	95-100
20	5925	59.25	62.10	37.90	30-70
10	2250	22.50	84.60	15.40	10-35
4.75	1350	13.50	98.10	1.90	0

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